Amendments to the Claims

Please cancel Claim 4 without prejudice or disclaimer.

Please amend Claims 1, 5, 6, 10, and 11 and add Claims 12 and 13 to read as follows.

1. (Currently Amended) A method for manufacturing a liquid discharge head including a substrate, on which is arranged an energy generating element to generate energy used to discharge liquid from a discharge port, and a flow path communicating with the energy generating element and the discharge port, the method comprising the steps of:

forming a solid layer for forming ~~a~~ the flow path on ~~a~~ the substrate ~~on which an energy generating element is arranged to generate energy that is used to discharge a liquid~~;

forming, on the substrate where the solid layer is formed, a coating resin layer for coating the solid layer;

forming ~~a~~ the discharge port~~, used to discharge the liquid,~~ through a photolithographic process, in the coating resin layer formed on the solid layer; and

removing the solid layer to form ~~a~~ the flow path ~~that communicates with the energy generating element and the discharge port~~,

wherein a material used for the coating resin layer contains a cationically polymerizable resin[[,]] and a basic material having a pair of nonshared electrons ~~cationic photopolymerization initiator and an inhibitor of cationic photopolymerization~~, and

wherein a material of the solid layer that forms a boundary with a portion where the discharge port of the coating resin layer is formed contains a copolymer of methacrylic acid and methacrylate ester.

2. (Previously Presented) A method according to claim 1, wherein the boundary between the solid layer and the coating resin layer is formed of a copolymer of methacrylic acid and methyl methacrylate.

3. (Previously Presented) A method according to claim 1, wherein the copolymer of methacrylic acid and methacrylate ester has a weight-average molecular weight of 50000 to 300000 and a ratio of a content of methacrylic acid of 5 to 30 weight%.

4. (Cancelled)

5. (Currently Amended) A method according to claim [[4]] 1, wherein the ~~inhibitor of cationic photopolymerization~~ basic material is a nitrogen-containing compound having a pair of nonshared electrons.

6. (Currently Amended) A method according to claim [[5]] 1, wherein the ~~inhibitor of cationic photopolymerization~~ basic material is an amine compound.

7. (Previously Presented) A method according to claim 1, wherein the step of forming the solid layer includes the steps of:

forming, on the substrate, a first positive type photosensitive material layer that is exposed to ionizing radiation of a first wavelength,

forming, on the first positive type photosensitive material layer, a second positive type photosensitive material layer that is exposed to ionizing radiation of a second wavelength that is different from the first wavelength,

irradiating the ionizing radiation of the second wavelength to the substrate where the first and the second positive type photosensitive material layers are formed, and forming a desired pattern on the second positive type photosensitive material layer, and

irradiating the ionizing radiation of the first wavelength to the substrate where the first and the second positive type photosensitive material layers are formed, and forming a desired pattern on the first positive type photosensitive material layer, and

wherein the second positive type photosensitive material layer forms the boundary with the coating resin layer.

8. (Previously Presented) A method according to claim 7, wherein a material for forming the first positive type photosensitive material layer contains polymethylisopropenylketone.

9. (Currently Amended) A liquid discharge head manufactured by a method according to one of claims 1 to 3 and 5 to 8, wherein a discharge port formation material used for forming a discharge port for the liquid discharge head contains a cationically polymerizable chemical compound, a cationic photopolymerization initiator and an inhibitor of cationic photopolymerization.

10. (Currently Amended) A method according to claim 3, wherein the step of forming the solid layer comprises:

providing on the substrate a positive type photosensitive material layer containing the copolymer of methacrylic acid and methacrylate ester; ~~and~~

heating the positive type photosensitive material layer at 120 to 150°C; and

after the heating forming the solid layer by patterning the positive type photosensitive material layer.

11. (Currently Amended) A method according to claim 1, wherein the step of forming the solid layer comprises:

providing on the substrate a positive type photosensitive material layer containing the copolymer of methacrylic acid and methacrylate ester with a solvent of diglyme,

wherein the material used for the coating resin layer further contains xylene ~~or methyl isobutyl ketone~~.

12. (New) A method according to claim 3, wherein the step of forming the solid layer comprises:

providing on the substrate a positive type photosensitive material layer containing the copolymer of methacrylic acid and methacrylate ester with a solvent of diglyme;

heating the positive type photosensitive material layer at 120 to 150°C; and

after the heating, forming the solid layer by patterning the positive type photosensitive material layer,

wherein the material used for the coating resin layer further contains xylene.

13. (New) A method according to claim 3, wherein the step of forming the solid layer comprises:

providing on the substrate a positive type photosensitive material layer containing the copolymer of methacrylic acid and methacrylate ester with a solvent of diglyme;

heating the positive type photosensitive material layer at 120 to 150°C; and

after the heating, forming the solid layer by patterning the positive type photosensitive material layer,

wherein the material used for the coating resin layer further contains methyl isobutyl ketone.